

SEQUENCE LISTING

<110> Bristol-Myers Squibb Company

<120> POLYNUCLEOTIDES ENCODING A NOVEL GLYCINE RECEPTOR ALPHA SUBUNIT EXPRESSED IN THE GASTROINTESTINAL TRACT, HGRA4, and SPLICE VARIANT THEREOF

<130> D0079 NP

<150> US 60/269,535

<151> 2001-02-16

<160> 81

<170> PatentIn version 3.0

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Asn Phe Lys Gly Pro Pro Val Asn Val Thr Cys Asn Ile Phe Ile Asn
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Pro Asp Asp Ser Leu Asp Leu Asp Pro Ser Met Leu Asp Ser Ile Trp
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Lys Asn Phe Pro Met Asp Ile Gln Thr Cys Thr Met Gln Leu Glu Ser
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Lys Ser Gly Thr Lys Gly Ser Gln Pro Met Ser Pro Ser Asp Phe Leu		
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Asp Lys Leu Met Gly Arg Thr Ser Gly Tyr Asp Ala Arg Ile Arg Pro		
50 55 60		
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Ser Phe Ser Ser Val Thr Lys Thr Met Asp Tyr Arg Val Asn Val		
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ttc ttg cgg caa cag tgg aat gac cca cgc ctg tcc tac cga gaa tat		336
Phe Leu Arg Gln Gln Trp Asn Asp Pro Arg Leu Ser Tyr Arg Glu Tyr		
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Pro Asp Asp Ser Leu Asp Leu Asp Pro Ser Met Leu Asp Ser Ile Trp		
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Glu Lys Asp Leu Gly Cys Cys Thr Lys His Tyr Asn Thr Gly Lys Phe
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 Gln

 <210> 11
 <211> 465
 <212> PRT
 <213> Homo sapiens

 <400> 11

Met Ala His Val Arg His Phe Arg Thr Leu Val Ser Gly Phe Tyr Phe
 1 5 10 15

Trp Glu Ala Ala Leu Leu Leu Ser Leu Val Ala Thr Lys Glu Thr Asp
 20 25 30

Ser Ala Arg Ser Arg Ser Ala Pro Met Ser Pro Ser Asp Phe Leu Asp
 35 40 45

Lys Leu Met Gly Arg Thr Ser Gly Tyr Asp Ala Arg Ile Arg Pro Asn
 50 55 60

Phe Lys Gly Pro Pro Val Asn Val Thr Cys Asn Ile Phe Ile Asn Ser
 65 70 75 80

Phe Gly Ser Ile Ala Glu Thr Thr Met Asp Tyr Arg Val Asn Ile Phe
 85 90 95

Leu Arg Gln Lys Trp Asn Asp Pro Arg Leu Ala Tyr Ser Glu Tyr Pro
 100 105 110

Asp Asp Ser Leu Asp Leu Asp Pro Ser Met Leu Asp Ser Ile Trp Lys
 115 120 125

Pro Asp Leu Phe Phe Ala Asn Glu Lys Gly Ala Asn Phe His Glu Val
 130 135 140

Thr Thr Asp Asn Lys Leu Leu Arg Ile Phe Lys Asn Gly Asn Val Leu
 145 150 155 160

Tyr Ser Ile Arg Leu Thr Leu Thr Leu Ser Cys Pro Met Asp Leu Lys
 165 170 175

Asn Phe Pro Met Asp Val Gln Thr Cys Ile Met Gln Leu Glu Ser Phe
 180 185 190

Gly Tyr Thr Met Asn Asp Leu Ile Phe Glu Trp Gln Asp Glu Ala Pro
 195 200 205

Val Gln Val Ala Glu Gly Leu Thr Leu Pro Gln Phe Leu Leu Lys Glu
 210 215 220

Glu Lys Asp Leu Arg Tyr Cys Thr Lys His Tyr Asn Thr Gly Lys Phe
 225 230 235 240

Thr Cys Ile Glu Val Arg Phe His Leu Glu Arg Gln Met Gly Tyr Tyr
 245 250 255

Leu Ile Gln Met Tyr Ile Pro Ser Leu Leu Ile Val Ile Leu Ser Trp
 260 265 270

Val Ser Phe Trp Ile Asn Met Asp Ala Ala Pro Ala Arg Val Ala Leu
 275 280 285

Gly Ile Thr Thr Val Leu Thr Met Thr Gln Ser Ser Gly Ser Arg
 290 295 300

Ala Ser Leu Pro Lys Val Ser Tyr Val Lys Ala Ile Asp Ile Trp Met
305 310 315 320

Ala Val Cys Leu Leu Phe Val Phe Ser Ala Leu Leu Glu Tyr Ala Ala
325 330 335

Val Asn Phe Val Ser Arg Gln His Lys Glu Leu Leu Arg Phe Arg Arg
340 345 350

Lys Arg Lys Asn Lys Thr Glu Ala Phe Ala Leu Glu Lys Phe Tyr Arg
355 360 365

Phe Ser Asp Met Asp Asp Glu Val Arg Glu Ser Arg Phe Ser Phe Thr
370 375 380

Ala Tyr Gly Met Gly Pro Cys Leu Gln Ala Lys Asp Gly Met Thr Pro
385 390 395 400

Lys Gly Pro Asn His Pro Val Gln Val Met Pro Lys Ser Pro Asp Glu
405 410 415

Met Arg Lys Val Phe Ile Asp Arg Ala Lys Lys Ile Asp Thr Ile Ser
420 425 430

Arg Ala Cys Phe Pro Leu Ala Phe Leu Ile Phe Asn Ile Phe Tyr Trp
435 440 445

Val Ile Tyr Lys Ile Leu Arg His Glu Asp Ile His His Gln Gln Gln
450 455 460

Asp
465

<210> 12
<211> 337
<212> PRT
<213> Mus musculus

<220>
<221> UNSURE
<222> (322)..(322)
<223> wherein "X" is any amino acid.

<400> 12

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Pro Met Ser Pro Ser Asp Phe Leu Asp Lys Leu Met Gly Arg Thr Ser
20 25 30

Gly Tyr Asp Ala Arg Ile Arg Pro Asn Phe Lys Gly Pro Pro Val Asn
35 40 45

Val Thr Cys Asn Ile Phe Ile Asn Ser Phe Gly Ser Val Thr Glu Thr

50

55

60

Thr Met Asp Tyr Arg Val Asn Val Phe Leu Arg Gln Gln Trp Asn Asp
 65 70 75 80

Pro Arg Leu Ala Tyr Arg Glu Tyr Pro Asp Asp Ser Leu Asp Leu Asp
 85 90 95

Pro Ser Met Leu Asp Ser Ile Trp Lys Pro Asp Leu Phe Phe Ala Asn
 100 105 110

Glu Lys Gly Ala Asn Phe His Glu Val Thr Thr Asp Asn Lys Leu Leu
 115 120 125

Arg Ile Phe Lys Asn Gly Asn Val Leu Tyr Ser Ile Arg Leu Thr Leu
 130 135 140

Ile Leu Ser Cys Pro Met Asp Leu Lys Asn Phe Pro Met Asp Ile Gln
 145 150 155 160

Thr Cys Thr Met Gln Leu Glu Ser Phe Gly Tyr Thr Met Asn Asp Leu
 165 170 175

Met Phe Glu Trp Leu Glu Asp Ala Pro Ala Val Gln Val Ala Glu Gly
 180 185 190

Leu Thr Leu Pro Gln Phe Ile Leu Arg Asp Glu Lys Asp Leu Gly Tyr
 195 200 205

Cys Thr Lys His Tyr Asn Thr Gly Lys Phe Thr Cys Ile Glu Val Lys
 210 215 220

Phe His Leu Glu Arg Gln Met Gly Tyr Tyr Leu Ile Gln Met Tyr Ile
 225 230 235 240

Pro Ser Leu Leu Ile Val Ile Leu Ser Trp Val Ser Phe Trp Ile Asn
 245 250 255

Met Asp Ala Ala Pro Ala Arg Val Gly Leu Gly Ile Thr Thr Val Leu
 260 265 270

Thr Met Thr Thr Gln Ser Ser Gly Ser Arg Ala Ser Leu Pro Lys Val
 275 280 285

Ser Tyr Val Lys Ala Ile Asp Ile Trp Met Ala Val Cys Leu Leu Phe
 290 295 300

Val Phe Ala Ala Leu Leu Glu Tyr Ala Ala Val Asn Phe Val Ser Arg
 305 310 315 320

Gln Xaa Lys Glu Phe Met Arg Leu Arg Arg Arg Gln Arg Arg Gln Arg
 325 330 335

Met

<210> 13

<211> 452
<212> PRT
<213> Homo sapiens

<400> 13

Met Asn Arg Gln Leu Val Asn Ile Leu Thr Ala Leu Phe Ala Phe Phe
1 5 10 15

Leu Glu Thr Asn His Phe Arg Thr Ala Phe Cys Lys Asp His Asp Ser
20 25 30

Arg Ser Gly Lys Gln Pro Ser Gln Thr Leu Ser Pro Ser Asp Phe Leu
35 40 45

Asp Lys Leu Met Gly Arg Thr Ser Gly Tyr Asp Ala Arg Ile Arg Pro
50 55 60

Asn Phe Lys Gly Pro Pro Val Asn Val Thr Cys Asn Ile Phe Ile Asn
65 70 75 80

Ser Phe Gly Ser Val Thr Glu Thr Thr Met Asp Tyr Arg Val Asn Ile
85 90 95

Phe Leu Arg Gln Gln Trp Asn Asp Ser Arg Leu Ala Tyr Ser Glu Tyr
100 105 110

Pro Asp Asp Ser Leu Asp Leu Asp Pro Ser Met Leu Asp Ser Ile Trp
115 120 125

Lys Pro Asp Leu Phe Phe Ala Asn Glu Lys Gly Ala Asn Phe His Asp
130 135 140

Val Thr Thr Asp Asn Lys Leu Leu Arg Ile Ser Lys Asn Gly Lys Val
145 150 155 160

Leu Tyr Ser Ile Arg Leu Thr Leu Thr Leu Ser Cys Pro Met Asp Leu
165 170 175

Lys Asn Phe Pro Met Asp Val Gln Thr Cys Thr Met Gln Leu Glu Ser
180 185 190

Phe Gly Tyr Thr Met Asn Asp Leu Ile Phe Glu Trp Leu Ser Asp Gly
195 200 205

Pro Val Gln Val Ala Glu Gly Leu Thr Leu Pro Gln Phe Ile Leu Lys
210 215 220

Glu Glu Lys Glu Leu Gly Tyr Cys Thr Lys His Tyr Asn Thr Gly Lys
225 230 235 240

Phe Thr Cys Ile Glu Val Lys Phe His Leu Glu Arg Gln Met Gly Tyr
245 250 255

Tyr Leu Ile Gln Met Tyr Ile Pro Ser Leu Leu Ile Val Ile Leu Ser
260 265 270

Trp Val Ser Phe Trp Ile Asn Met Asp Ala Ala Pro Ala Arg Val Ala
 275 280 285
 Leu Gly Ile Thr Thr Val Leu Thr Met Thr Thr Gln Ser Ser Gly Ser
 290 295 300
 Arg Ala Ser Leu Pro Lys Val Ser Tyr Val Lys Ala Ile Asp Ile Trp
 305 310 315 320
 Met Ala Val Cys Leu Leu Phe Val Phe Ala Ala Leu Leu Glu Tyr Ala
 325 330 335
 Ala Val Asn Phe Val Ser Arg Gln His Lys Glu Phe Leu Arg Leu Arg
 340 345 350
 Arg Arg Gln Lys Arg Gln Asn Lys Glu Glu Asp Val Thr Arg Glu Ser
 355 360 365
 Arg Phe Asn Phe Ser Gly Tyr Gly Met Gly His Cys Leu Gln Val Lys
 370 375 380
 Asp Gly Thr Ala Val Lys Ala Thr Pro Ala Asn Pro Leu Pro Gln Pro
 385 390 395 400
 Pro Lys Asp Gly Asp Ala Ile Lys Lys Phe Val Asp Arg Ala Lys
 405 410 415
 Arg Ile Asp Thr Ile Ser Arg Ala Ala Phe Pro Leu Ala Phe Leu Ile
 420 425 430
 Phe Asn Ile Phe Tyr Trp Ile Thr Tyr Lys Ile Ile Arg His Glu Asp
 435 440 445
 Val His Lys Lys
 450
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 <211> 298
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 <213> homo sapiens
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 Ala Arg Ile Arg Pro Asn Phe Lys Gly Pro Pro Val Asn Val Thr Cys
 20 25 30
 Asn Ile Phe Ile Asn Ser Phe Ser Ser Val Thr Lys Thr Thr Met Asp
 35 40 45
 Tyr Arg Val Asn Val Phe Leu Arg Gln Gln Trp Asn Asp Pro Arg Leu
 50 55 60
 Ser Tyr Arg Glu Tyr Pro Asp Asp Ser Leu Asp Leu Asp Pro Ser Met
 65 70 75 80

Leu Asp Ser Ile Trp Lys Pro Asp Leu Phe Phe Ala Asn Glu Lys Gly
 85 90 95
 Ala Asn Phe His Glu Val Thr Thr Asp Asn Lys Leu Leu Arg Ile Phe
 100 105 110
 Lys Asn Gly Asn Val Leu Tyr Ser Ile Arg Leu Thr Leu Ile Leu Ser
 115 120 125
 Cys Leu Met Asp Leu Lys Asn Phe Pro Met Asp Ile Gln Thr Cys Thr
 130 135 140
 Met Gln Leu Glu Ser Phe Gly Tyr Thr Met Lys Asp Leu Val Phe Glu
 145 150 155 160
 Trp Leu Glu Asp Ala Pro Ala Val Gln Val Ala Glu Gly Leu Thr Leu
 165 170 175
 Pro Gln Phe Ile Leu Arg Asp Glu Lys Asp Leu Gly Cys Cys Thr Lys
 180 185 190
 His Tyr Asn Thr Gly Lys Phe Thr Cys Ile Glu Val Lys Phe His Leu
 195 200 205
 Glu Arg Gln Met Gly Tyr Tyr Leu Ile Gln Met Tyr Ile Pro Ser Leu
 210 215 220
 Leu Ile Val Ile Leu Ser Trp Val Ser Phe Trp Ile Asn Met Asp Ala
 225 230 235 240
 Ala Pro Ala Arg Val Gly Leu Gly Ile Thr Thr Val Leu Thr Met Thr
 245 250 255
 Thr Gln Ser Ser Gly Ser Arg Ala Ser Leu Pro Lys Val Ser Tyr Val
 260 265 270
 Lys Ala Ile Asp Ile Trp Met Ala Val Cys Leu Leu Phe Val Phe Ala
 275 280 285
 Ala Leu Leu Glu Tyr Ala Ala Ile Asn Phe
 290 295
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 <211> 312
 <212> PRT
 <213> homo sapiens
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 Ala Arg Ile Arg Pro Asn Phe Lys Gly Pro Pro Val Asn Val Thr Cys
 20 25 30
 Asn Ile Phe Ile Asn Ser Phe Ser Ser Val Thr Lys Thr Thr Met Asp

35

40

45

Tyr Arg Val Asn Val Phe Leu Arg Gln Gln Trp Asn Asp Pro Arg Leu
 50 55 60

Ser Tyr Arg Glu Tyr Pro Asp Asp Ser Leu Asp Leu Asp Pro Ser Met
 65 70 75 80

Leu Asp Ser Ile Trp Lys Pro Asp Leu Phe Phe Ala Asn Glu Lys Gly
 85 90 95

Ala Asn Phe His Glu Val Thr Thr Asp Asn Lys Leu Leu Arg Ile Phe
 100 105 110

Lys Asn Gly Asn Val Leu Tyr Ser Ile Arg Leu Thr Leu Ile Leu Ser
 115 120 125

Cys Leu Met Asp Leu Lys Asn Phe Pro Met Asp Ile Gln Thr Cys Thr
 130 135 140

Met Gln Leu Glu Ser Ser Ser Ile Leu Cys Ser Pro Leu Pro Ser Leu
 145 150 155 160

Ser Leu Ser Val Gly Tyr Thr Met Lys Asp Leu Val Phe Glu Trp Leu
 165 170 175

Glu Asp Ala Pro Ala Val Gln Val Ala Glu Gly Leu Thr Leu Pro Gln
 180 185 190

Phe Ile Leu Arg Asp Glu Lys Asp Leu Gly Cys Cys Thr Lys His Tyr
 195 200 205

Asn Thr Gly Lys Phe Thr Cys Ile Glu Val Lys Phe His Leu Glu Arg
 210 215 220

Gln Met Gly Tyr Tyr Leu Ile Gln Met Tyr Ile Pro Ser Leu Leu Ile
 225 230 235 240

Val Ile Leu Ser Trp Val Ser Phe Trp Ile Asn Met Asp Ala Ala Pro
 245 250 255

Ala Arg Val Gly Leu Gly Ile Thr Thr Val Leu Thr Met Thr Thr Gln
 260 265 270

Ser Ser Gly Ser Arg Ala Ser Leu Pro Lys Val Ser Tyr Val Lys Ala
 275 280 285

Ile Asp Ile Trp Met Ala Val Cys Leu Leu Phe Val Phe Ala Ala Leu
 290 295 300

Leu Glu Tyr Ala Ala Ile Asn Phe
 305 310

<210> 16

<211> 13

<212> PRT

<213> homo sapiens

<400> 16

Asn Asp Pro Arg Leu Ser Tyr Arg Glu Tyr Pro Asp Asp
1 5 10

<210> 17

<211> 13
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<400> 17

Gly Asn Val Leu Tyr Ser Ile Arg Leu Thr Leu Ile Leu
1 5 10

<210> 18

<211> 13
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<400> 18

Glu Ser Phe Gly Tyr Thr Met Lys Asp Leu Val Phe Glu
1 5 10

<210> 19

<211> 13
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<400> 19

Thr Lys His Tyr Asn Thr Gly Lys Phe Thr Cys Ile Glu
1 5 10

<210> 20

<211> 13
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<400> 20

Leu Arg Glu Gly Glu Thr Thr Arg Lys Leu Tyr Val Asp
1 5 10

<210> 21

<211> 12
<212> PRT
<213> homo sapiens

<400> 21

Arg Glu Gly Glu Thr Thr Arg Lys Leu Tyr Val Asp
1 5 10

<210> 22

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<211> 14
<212> PRT
<213> homo sapiens

<400> 22

Lys Gly Pro Pro Val Asn Val Thr Cys Asn Ile Phe Ile Asn
1           5           10

<210> 23
<211> 27
<212> PRT
<213> homo sapiens

<400> 23

Met Gly Tyr Tyr Leu Ile Gln Met Tyr Ile Pro Ser Leu Leu Ile Val
1           5           10           15

Ile Leu Ser Trp Val Ser Phe Trp Ile Asn Met
20           25

<210> 24
<211> 18
<212> PRT
<213> homo sapiens

<400> 24

Val Gly Leu Gly Ile Thr Thr Val Leu Thr Met Thr Thr Gln Ser Ser
1           5           10           15

Gly Ser

<210> 25
<211> 24
<212> PRT
<213> homo sapiens

<400> 25

Ile Trp Met Ala Val Cys Leu Leu Phe Val Phe Ala Ala Leu Leu Glu
1           5           10           15

Tyr Ala Ala Ile Asn Phe Val Ser
20

<210> 26
<211> 27
<212> PRT
<213> homo sapiens

<400> 26

Met Gly Tyr Tyr Leu Ile Gln Met Tyr Ile Pro Ser Leu Leu Ile Val
1           5           10           15

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Ile Leu Ser Trp Val Ser Phe Trp Ile Asn Met
20 25

<210> 27
<211> 18
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<213> homo sapiens

<400> 27

Val Gly Leu Gly Ile Thr Thr Val Leu Thr Met Thr Thr Gln Ser Ser
1 5 10 15

Gly Ser

<210> 28
<211> 24
<212> PRT
<213> homo sapiens

<400> 28

Ile Trp Met Ala Val Cys Leu Leu Phe Val Phe Ala Ala Leu Leu Glu
1 5 10 15

Tyr Ala Ala Ile Asn Phe Val Ser
20

<210> 29
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<212> PRT
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<400> 29

Lys Gly Pro Pro Val Asn Val Thr Cys Asn Ile Phe Ile Asn
1 5 10

<210> 30
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<213> homo sapiens

<400> 30

Asn Asp Pro Arg Leu Ser Tyr Arg Glu Tyr Pro Asp Asp
1 5 10

<210> 31
<211> 13
<212> PRT
<213> homo sapiens

<400> 31

Gly Asn Val Leu Tyr Ser Ile Arg Leu Thr Leu Ile Leu
1 5 10

<210> 32

<211> 13

<212> PRT

<213> homo sapiens

<400> 32

Leu Ser Val Gly Tyr Thr Met Lys Asp Leu Val Phe Glu
1 5 10

<210> 33

<211> 13

<212> PRT

<213> homo sapiens

<400> 33

Thr Lys His Tyr Asn Thr Gly Lys Phe Thr Cys Ile Glu
1 5 10

<210> 34

<211> 13

<212> PRT

<213> homo sapiens

<400> 34

Leu Arg Glu Gly Glu Thr Thr Arg Lys Leu Tyr Val Asp
1 5 10

<210> 35

<211> 12

<212> PRT

<213> homo sapiens

<400> 35

Arg Glu Gly Glu Thr Thr Arg Lys Leu Tyr Val Asp
1 5 10

<210> 36

<211> 8

<212> PRT

<213> bacteriophage T7

<400> 36

Asp Tyr Lys Asp Asp Asp Asp Lys
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<210> 37

<211> 733

<212> DNA

<213> homo sapiens

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aattcgaggg	tgcacccgtca	gtcttcctct	tccccccaaa	acccaaggac	accctcatga	120
tctccggac	tcctgaggc	acatgcgtgg	tggtggacgt	aagccacgaa	gaccctgagg	180
tcaagttcaa	ctgg tacgtg	gacggcgtgg	aggcataa	tgccaagaca	aagccgcggg	240
aggagcagta	caacagcact	taccgtgtgg	tcagcgtcct	caccgtcctg	caccaggact	300
ggctgaatgg	caaggagtagc	aagtgcagg	tctccaacaa	agccctccca	accccccattcg	360
agaaaaccat	ctccaaagcc	aaagggcagc	cccgagaacc	acagggtgtac	accctgcccc	420
catccggga	tgagctgacc	aagaaccagg	tcagcctgac	ctgcctggc	aaaggcttct	480
atccaagcga	catcgccgtg	gagtgggaga	gcaatgggca	gccggagaac	aactacaaga	540
ccacgcctcc	cgtgctggac	tccgacggct	ccttcttcct	ctacagcaag	ctcaccgtgg	600
acaagagcag	gtggcagcag	gggaacgtct	tctcatgctc	cgtgatgcat	gaggctctgc	660
acaaccacta	cacgcagaag	agcctctccc	tgtctccggg	taaatgagtg	cgacggccgc	720
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<210> 47
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<400> 47
tgaggagacg gtgaccgtgg tccc

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<210> 48
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<400> 48
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<400> 49
gatgttgtga tgactcagtc tcc

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gatatttgtga tgactcagtc tcc

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gaaatttgtt tgacgcagtc tcc

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gacatcgatgta tgacctcagtc tcc

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gaaattgtgc tgactcagtc tcc

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cagtctgccc tgactcagcc tgc

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tcctatgtgc tgactcagcc acc

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<400> 58
tcttctgagc tgactcagga ccc

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cacgttatac tgactcaacc gcc

23

<210> 60

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aattttatgc tgactcagcc cca                                23

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acgtttgatc tccagcttgg tccc                                24

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acgtttgata tccactttgg tccc                                24

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24

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23

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cagtctgccc tgactcagcc tgc

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<210> 69
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<400> 69
tccttatgtgc tgactcagcc acc

23

<210> 70
<211> 23
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<400> 70
tcttctgagc tgactcagga ccc

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<210> 71
<211> 23
<212> DNA
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cacgttatac tgactcaacc gcc

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<210> 72
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caggctgtgc tcactcagcc gtc

23

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<210> 73
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<212> DNA
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<210> 74
<211> 16
<212> PRT
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1           5          10          15

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<400> 76
gatcctgcca ccatgctagt taa                                23

<210> 77
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<210> 78
<211> 39
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<400> 79
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35

<210> 80
<211> 39
<212> DNA
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<400> 80
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39

<210> 81
<211> 36
<212> DNA
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<400> 81
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36